

**REMARKS**

By the foregoing Amendment, Claims 1, 2, 14, 16, 17, 19, 28, 30 and 32 are amended and Claim 7 is cancelled. Entry of the Amendment, and favorable consideration thereof, is earnestly requested. Claims 1-6 and 8-32 are currently pending.

Claims 2, 7, 14, 16, 17, 19, 30 and 32 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claim 7 has been cancelled and Claims 2, 14, 16, 17, 19, 30 and 32 have been amended in a manner which Applicant believes obviates these rejections.

Claim 1 has been amended to read as follows:

1. Gum base granules comprising at least one biodegradable gum base polymer, wherein the gum base has a water content of less than 5.0% by weight of the gum base.

Basis for the amendment may be found, e.g., on page 2, lines 14-15, page 8, lines 14-15, and page 9, lines 3-4 of the international application as originally filed.

The amendment clarifies in line with the description that the biodegradable polymer is a gum base polymer, i.e., that the biodegradable polymer is part of the gum base-forming polymers equivalent to conventional elastomers and elastomer plasticizers.

Also, Claim 28 has been amended to correct an error by correcting the reference to the previously mentioned granules, which are, of course, said "gum base granules", not "chewing gum granules", as chewing gum granules have not been mentioned previously. Moreover, as it appears from Claim 28 that the previously described granules are included in a compressed chewing gum comprising chewing gum ingredients, it is clear that nothing else than said "gum base granules" could have been the intended wording in the context of Claim 28. This is also in accordance with page 15, lines 21-24 of the description.

Claim 1, the only independent claim, stands rejected under 35 U.S.C. 103(a) as being unpatentable over: (i) Thorengaard et al. (WO 2004/004480) in view of Wittorff et al. (WO 02/076230), (ii) Bunczek et al. (U.S. Patent No. 6,017,566) in view of Gmunder et al. (U.S. Patent No. 6,200,608), and (iii) Wittorff et al. in view of Gmunder et al. Applicant respectfully asks the Examiner to reconsider these rejections in view of the above Amendments and the below Remarks.

Initially, it is noted that the present application is a U.S. national stage entry, pursuant to 35 U.S.C. 371, of PCT/DK2003/000941, filed **December 30, 2003**.

Applicant also notes that Thorengaard et al. was published on **January 15, 2004**, which is after the earliest effective filing date of the present application, and therefore that Thorengaard et al. qualifies as prior art under 35 U.S.C. 102(e), but not under 35 U.S.C. 102(b). Furthermore, Applicant respectfully points out that, pursuant to 35 U.S.C. 103(c):

Subject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of **section 102** of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Additionally, Applicant respectfully points out that, pursuant to MPEP § 706.02(I)(3):

Applications and patents will be considered to be owned by, or subject to an obligation of assignment to, the same person, at the time the invention was made, if the applicant(s) or an attorney or agent of record makes a statement to the effect that the application and the reference were, at the time the invention was made, owned by, or subject to an obligation of assignment to, the same person(s) or organization(s).

Applicant, through its undersigned attorney of record hereby makes the following statement:

**The present application (U.S. Patent Application No. 10/585,019) and the Thorengaard et al. reference (WO 2004/004480) were, at the time**

**the invention was made, owned by, or subject to an obligation of assignment to, the same person(s) or organization(s).**

Applicant respectfully submits that the above statement is sufficient to invoke 35 U.S.C. 103(c), and that Thorengaard et al. is, therefore, no longer properly cited as part of a rejection under 35 U.S.C. 103(a).

With respect to the rejections based upon Bunczek et al. or Wittorff et al. in view of Gmunder et al., Applicant respectfully asks that these rejections be reconsidered.

The combinations of Bunczek et al. or Wittorff et al. in view of Gmunder et al. is justified through the argument that they "are combinable because they are concerned with the same field of endeavor, namely, gum base compositions." However, it should be noted that even though the present invention and all documents cited disclose gum base compositions, prior to the present invention there has never been any connection between the field of compressed chewing gum and the field of biodegradable chewing gum. These two fields mark two very distinct fields of chewing gum developments and consequently a person with ordinary skill in the art of compressed chewing gum (Gmunder et al.) could in no way be expected to possess knowledge of biodegradable chewing gum (Bunczek et al. and Wittorff et al.).

It should be noted that biodegradable polymers applicable in chewing gum are quite new and prior to Bunczek et al., which was published only a few years prior to filing of the present application, very little literature can be found on the subject.

Bunczek et al. and Wittorff et al. teach gum bases including polyester. As stated by the examiner, indication is given as to neither granules nor low water content.

Gmunder et al. teaches particulated chewing gum bases. The purpose of the particulated chewing gum base of Gmunder et al. is to make transportation of chewing gum base easier, and conventional chewing gum can then be manufactured by standard melting and/or mixing methods when the particulated chewing gum base has reached its target. This is indeed in contrast to the present application, where the granules are used to make compressed chewing gum.

No indication is given in Gmunder et al. that degradable polymers may be used. Furthermore even if the skilled person should be presented with a degradable polymer, he/she would refrain from using it in the invention of Gmunder et al. in that it seems likely that degradable polymers may start to pre-

degrade if kept as granules with large surface/volume ratio for a long time, which will be the case during transportation as in Gmunder et al.

The Examiner states that Gmunder et al. teaches that the gum base is free of liquid ingredients with reference to a sentence stating that "the gum base being free of liquid ingredients." However, the meaning of this sentence is explained in Gmunder et al., Col. 6, Lines 27-39:

**Liquid ingredients are not present** in the preferred particulated gum base of the present invention **to a functional degree**. By functional degree it is meant that the level of liquid ingredients present in the particulated gum base will not appreciatively cause the pulverized ingredients or the final inventive gum base from re-agglomerating or have reduced free-flowing particulate dry form. By free-flowing it is meant that the particulated gum base may be poured from a container at a relatively even flow rate, as opposed to coming out of the container in large clumps. **It is obvious that small amounts of liquids such as emulsifiers and softeners, when mixed with other ingredients such as fillers, may result in these liquid ingredients to be able to present in the invention.** The act of doing this is in no way meant to avoid the scope of the present invention.

(emphasis added).

Exactly how much is meant with "small amounts" is unknown; however, in the examples up to 47% of softener is used. It is not specified which softener it is and the description states a number of different usable softeners. For example, from the description at Col. 5, Lines 13-19 is stated that:

Softeners include fully hydrogenated oils of cottonseed, soybean, palm, palm kernel, coconut, safflower and the like, as well as monoglycerides, diglycerides, acetylated monoglycerides, distilled mono- and diglycerides

and de-oiled or "powdered" lecithin. The glycerides and lecithin are sometimes referred to as emulsifiers.

In this regard it is noted that some of these softeners, in particular glycerides and lecithin, will typically inherently contain water/moisture. For some types of softeners used in chewing gum, it is known for these to comprise perhaps 25% by weight of water. With the sentence "when mixed with other ingredients such as fillers" it is acknowledged that this may be the case, but that the moisture content is not high enough to be a risk towards re-agglomeration. However, such water content may still be problematic in relation to degradability of the polymers, even though not problematic in relation to re-agglomeration. In other words, the water content of a chewing gum may be quite significant, even in Gmunder et al.

As none of Bunczek et al., Wittorff et al. nor Gmunder et al. includes any pointers towards each other and that the skilled person will not be skilled both within the art of compressed chewing gum and the art of biodegradable chewing gum, it is submitted that the combination of neither Bunczek et al. nor Wittorff et al. with Gmunder et al. is obvious.

Furthermore, even if such combination is made, it is neither clear from Bunczek et al./Wittorff et al. nor Gmunder et al. that the resulting product should end up with water content below 5% by weight of the gum base.

In view of the above, the skilled person would not reach the present invention of amended Claim 1, and consequently, amended Claim 1 is non-obvious, as are all remaining claims, which ultimately depend therefrom.

For the foregoing reasons, Applicant respectfully submits that all pending claims, namely Claims 1-6 and 8-32, are patentable over the references of record, and earnestly solicits allowance of the same.

Respectfully submitted,

September 21, 2009

/Todd M. Oberdick/  
Richard J. Basile, Reg. No. 40,501  
Todd M. Oberdick, Reg. No. 44,268  
ST. ONGE STEWARD JOHNSTON & REENS LLC  
986 Bedford Street  
Stamford, Connecticut 06905-5619  
(203) 324-6155  
Attorneys for Applicant